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TITLE: Smart antenna system using phase estimation

INVENTOR: LIM, S H

PATENT-ASSIGNEE: HYNIX SEMICONDUCTOR INC[HYNIN]

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PATENT-FAMILY:

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APPLICATION-DATA:

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ABSTRACTED-PUB-NO: KR2002057594A

BASIC-ABSTRACT:

NOVELTY - A smart antenna system using phase estimation is provided to compensate a phase delay due to an array antenna by adding up the complex despread signals received to the array antenna during give periods, extracting samples, and multiplying the conjugate complexes of the extracted samples by the complex despread signals.

DETAILED DESCRIPTION - A smart antenna system using phase estimation consists of array antennas(10-1-10-k), down converters(20-1-20-k), complex despreaders(30-1-30-k), combiners(40-1-40-k), samplers(50-1-50-k), conjugate complex extractors(60-1-60-k), multipliers(70-1-70-k), a signal combiner(80), and a Walsh despreaders(90). The array antennas(10-1-10-k) grasp the locations of long-distance signals, selectively transmit and receive the signals, and cancel the interfering noise inputted from the external. The down converters(20-1-20-k) execute frequency down conversion for the signals received from the array antennas (10-1-10-k). The complex despreaders(30-1-30-k) execute complex despreding for the down-converted signals. The combiners(40-1-40-k) add up a specific user's complex

despread signals during given periods. The samplers(50-1-50-k) extract sample signals from the summed signals. The conjugate complex extractors(60-1-60-k) obtain the conjugate complexes of the extracted sample signals. The multipliers(70-1-70-k) multiplies the obtained conjugate complexes by the output signals of the complex despreaders (30-1-30-k). The signal combiner(80) adds up the output signals of the multipliers(70-1-70-k). The Walsh despreaders(90) executes Walsh desreading for the output of the signal combiner(80) and transfers it to a rake mixer.

CHOSEN-DRAWING: Dwg.1/10

TITLE-TERMS: SMART ANTENNA SYSTEM PHASE ESTIMATE

DERWENT-CLASS: W02

EPI-CODES: W02-K05;

